

Digitized Reality: The Effects of High Frame Rate on Visual Perception

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Abstract

The digital revolution changed film production and its aesthetics in many ways. Although motion is a defining feature of moving images, it is also one of their most problematic aspects because of blurred images or other signal processing artifacts. An artistic research project was conducted to test the effects of high frame rates (HFR) on visual perception. Typical camera movements were recorded in different frame rates (24 / 48 / 96 fps) to generate test sequences for a cinema experiment. 69 participants were measured with an SMI eye tracking device and a questionnaire in a within subjects design. The results show that the participants valued the higher image quality of HFR, but rated the standard frame rate as more realistic and indicated more presence. Moreover, HFR produced a higher number of fixations than the standard frame rate. Open questions for future research projects on HFR will be discussed.